

**Remarks**

The Final Office Action mailed on August 20, 2010 has been reviewed carefully and the application amended in a sincere effort to place the application in condition for allowance. Accordingly, reconsideration of the claims, and allowance of the same, are respectfully requested on the basis of the following remarks.

Upon entry of this Amendment, Claims 1-4, 9, 11, 18-19, 22-24, 26, 28, 30-31, and 35-36 will be pending in the application. Claims 5-8, 10, 12-17, 20-21, 25, 27, 29, 32-33, and 34 have been cancelled.

Claims 1, 28, and 30 have been amended to remove the language reciting the flame spread values which were rejected by the Examiner under 35 U.S.C. 112.

Applicants have also amended Claims 1, 28, and 30 to further recite the blowing agent consists only of carbon and hydrogen atoms. Support for this amendment can be found on page 6, line 19, as well as from page 6, line 29, to page 7, line 8. On those pages, the blowing agent is described as a hydrocarbon and the specific examples listed on those pages are all hydrocarbons that consist only of carbon and hydrogen atoms (e.g., n-butane). Because there is support for the amendments made to Claims 1, 28, and 30 in the specification as filed, no new matter is presented.

**Foreign Priority Documents**

The Office Action indicated that the foreign priority documents have not been received. According to the European Patent Office, those documents were transmitted to the USPTO on May 20, 2010. However, in order to expedite this process, the Applicants have submitted form PTO/SB/38 on September 9, 2010.

**Rejection of Claims 1-4, 9, 11, 18, 19, 22-24, 26, 28, 30-31, and 35-36 under 35 U.S.C. 112**

The Examiner has rejected Claims 1-4, 9, 11, 18, 19, 22-24, 26, 28, 30, 31, and 35-36 under 35 U.S.C. 112, first paragraph, for allegedly failing to comply with the written description requirement.

As stated above, the Applicants have removed the flame spread values that were recited in Claims 1, 28, and 30. Accordingly, the Applicants request that the rejection of these claims under 35 U.S.C. 112 be withdrawn.

Rejection of Claims 1-4, 9, 11, 18-19, 22-24, 26, 28, 30-31, 33, and 35-36 under 35 U.S.C. 103(a)

The Examiner has rejected Claims 1-4, 9, 11, 18-19, 22-24, 26, 28, 30-31, 33, and 35-36 under 35 U.S.C. 103(a) for allegedly being unpatentable over U.S. Pat. No. 6,403,665 (hereinafter, "Sieker") in view of U.S. Pat. No. 5,143,945 (hereinafter, "Bodnar").

The present application is a continuation of International Application PCT/EP02/09541, which was filed on August 27, 2002, and which claimed priority to European Patent Application No. 01830553.2 which was filed on August 30, 2001. These facts are reflected in the filing receipt mailed on May 7, 2004.

Because the present application has an effective date before the publication date of Sieker, the Applicants submit that Sieker cannot be used as a reference against the present application.

Moreover, pursuant to 35 U.S.C. 103(c), the Applicants submit that Sieker cannot be used as a reference under 35 U.S.C. 103(a) since both Sieker and the present application, at the time the present application was made, were assigned to the same entity; namely, Huntsman International LLC. As can be seen from the attached documents, Sieker was assigned from Imperial Chemicals Industries PLC to Huntsman ICI Chemicals LLC on March 2, 2000 (see Exhibit A). Huntsman ICI Chemicals changed its name to Huntsman International LLC on December 8, 2000 (see Exhibit B). Additionally, the attached Patent Assignment shows that the present invention was assigned to Huntsman International LLC on January 1, 2004 (see Exhibit C).

In general, Bodnar discloses a rigid polyurethane-polyisocyanurate foam prepared from polyisocyanates, polyols, trimer catalysts, and a blowing agent mixture comprising (i) a halocarbon, and (ii) an organic carboxylic acid, and, optionally, water (see Abstract).

In contrast to the present invention and as conceded by the Examiner, Bodnar does not disclose and/or suggest the hydrocarbon blowing agents that are recited in Claims 1, 28, and 30 of the present invention (see page 9, paragraph 2 of the Final Office Action). Accordingly, the Applicants submit that Claims 1, 28, and 30, and the claims that depend therefrom, are patentable over Bodnar.

Rejection of Claims 1-4, 9, 11, 18-19, 22-24, 26, 28, 30-31, 33, and 35-36 under 35 U.S.C. 103(a)

The Examiner has rejected Claims 1-4, 9, 11, 18-19, 22-24, 26, 28, 30-31, 33, and 35-36 under 35 U.S.C. 103(a) for allegedly being unpatentable Bondnar in view of U.S. Pat. No. 5,688,835 (hereinafter, "Scherbel").

As stated above, the Examiner has conceded that Bodnar does not disclose and/or suggest the hydrocarbon blowing agents that are recited in Claims 1, 18, and 30 of the present invention. Accordingly, the Examiner relies on Scherbel to disclose such a feature.

In general, Scherbel appears to disclose a process or producing a polyurethane rigid foam that comprises reacting (a) organic polyisocyanates, (b) relatively high molecular weight compounds containing at least two respective hydrogen atoms and, if desired, (c) low molecular weight chain extenders and/or crosslinkers in the presence of (d) blowing agents, (e) catalysts and, if desired, (f) auxiliaries and additives (see Abstract).

The Examiner asserts that it would have been obvious to one skilled in the art to have replaced the halocarbons of Bodnar with the hydrocarbons disclosed in Scherbel. The Applicants, however, submit that one skilled in the art would not make such a modification in view of the teachings of Bodnar and that the Examiner, therefore, has not properly set forth a *prima facie* case of obviousness.

While Scherbel does disclose that non-chlorine or fluorine containing hydrocarbons have been evaluated against hydrocarbons containing such atoms (CFCs), the Examiner ignores the fact that Bodnar clearly teaches away from the modification as asserted by the Examiner.

Bodnar states:

Total replacement of halocarbon and particularly fluorocarbon blowing agents is certainly an ultimate goal in addressing any questions relating to their negative environmental impact....It should be noted that fluorocarbon blown rigid polyurethane foams have much superior physical properties compared with foams blown with carboxylic acids or combinations of water and acids. This superiority is seen particularly in thermal insulation and friability properties. Consequently, the replacement, even in partial amounts, of the so-called freons with carboxylic acids has yet to reach any commercial significance. This is a direct result of the competing reactions between hydroxyl and carboxylic groups for

isocyanate when preparing rigid polyurethane foams. Even when stoichiometric allowance is made for the acid by adding sufficient isocyanate to react with both groups, there always appears to be some imbalance resulting in either unreacted isocyanate or, more often, hydroxyl groups left in the foam. This contributes to the cause of the inferior physical properties (see Column 2, lines 8-30).

Additionally, Bodnar is clear that novelty lies in the presence of the halocarbon blowing agent:

The novelty in the present invention resides in the blowing agent mixture...[that] comprises (i) a halocarbon blowing agent and (ii) an organic carboxylic acid (see Column 3, lines 38-40).

The proportions in which (i) and (ii) are employed are not critical except to the extent that sufficient fluorocarbon should be present to maintain in the resultant foams the excellent thermal insulation and friability properties more consistent with fluorocarbon blowing than with carboxylic acid blowing (see Column 4, lines 29-34).

In other words, while Bodnar recognizes the benefits of replacing the fluorocarbon blowing agents, Bodnar explicitly teaches away from making such a replacement since several negative effects will be observed (e.g., poorer thermal insulation and friability) if such a replacement is made to a polyurethane-polyisocyanurate foam composition. Because Bodnar already considered the combination as suggested by the Examiner and has explicitly taught away from such a combination, the Applicants submit that there is no rationale as to why one skilled in the art would make the modification as asserted by the Examiner. Because Bodnar does in fact criticize, discredit, or otherwise discourage the solution asserted by the Examiner (MPEP 2145), the Applicants submit that the Examiner has not provided a proper *prima facie* case of obviousness.

Because the Examiner has not properly set forth a *prima facie* case of obviousness and because neither Bodnar nor Scherbel discloses every feature that is

recited in Claims 1, 28, and 30, the Applicants submit that these claims, and the claims that depend therefrom, are in condition for allowance.

**Conclusion**

In light of the foregoing arguments, it is respectfully submitted that Claims 1-4, 9, 11, 18-19, 22-24, 26, 28, 30-31, and 35-39 are in proper form for issuance of a Notice of Allowance and such action is respectfully requested at an early date.

Respectfully Submitted,



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